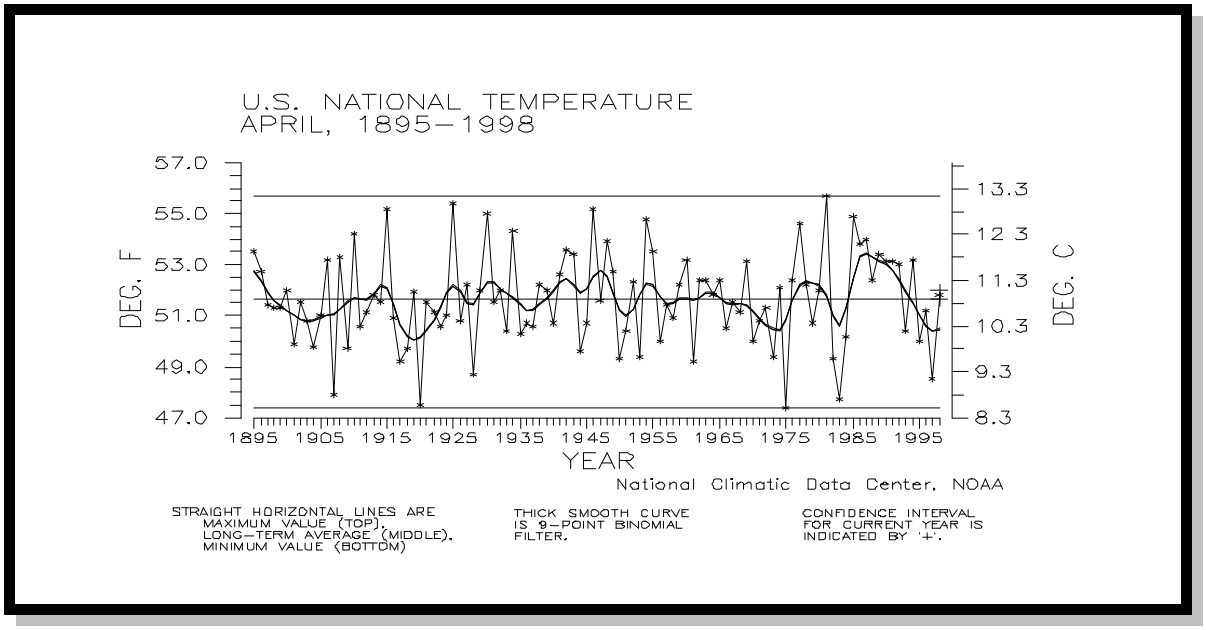
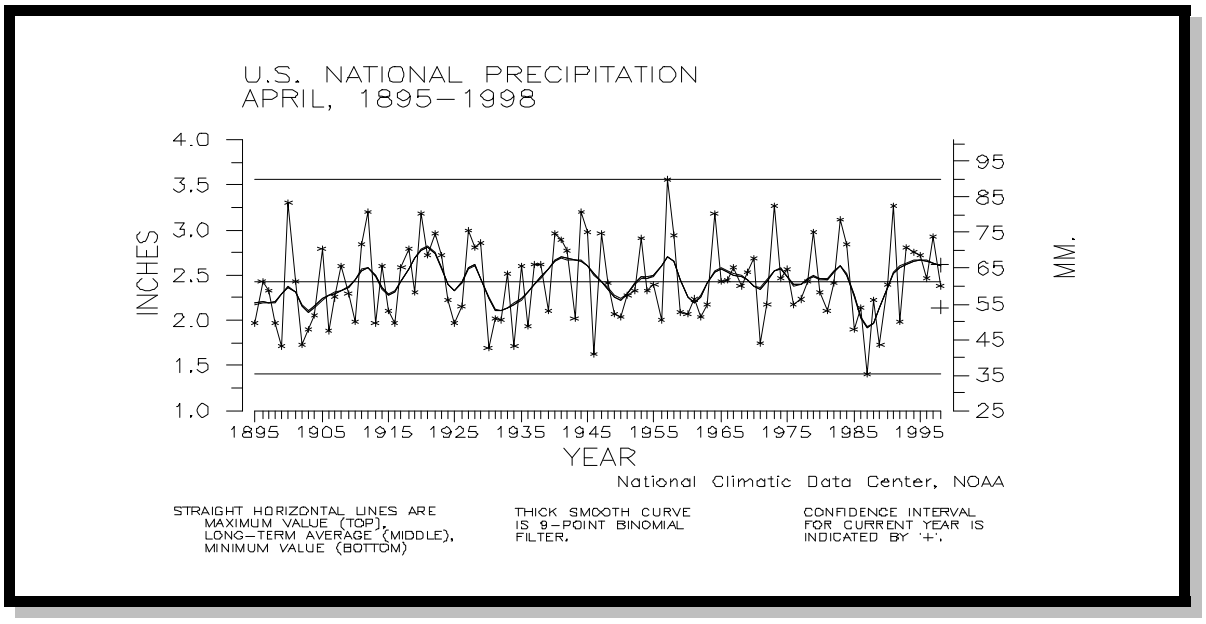
Monthly Activity Report

April 1998





Preliminary data for April 1998 indicate that temperature averaged across the contiguous United States was at the long-term mean ranking as the 49th warmest April since 1895 (top figure). Seven percent of the country was much warmer than normal while slightly more than two percent of the country was much cooler than normal.

Preliminary precipitation data indicate that April 1998 was the 50th driest such month since 1895 (bottom figure). Over six percent of the country experienced much drier than normal conditions while about six percent of the country was much wetter than normal.

DIRECTOR'S HIGHLIGHTS

El Niño Information Provided for Vice President

In response to a request by the White House office of Science, Technology and Policy, information on El Niño effects was provided for Vice President Gore's recent visit to disaster sites in Georgia and Alabama. National Climatic Data Center figures show that this year, the state of Georgia had the wettest winter on record, as did the Southeast overall. Alabama had the 11th wettest winter. The preliminary number of tornado-related deaths so far this year are: Georgia, 18; Alabama, 32; Florida, 42; North Carolina, 2; Virginia, 2. In 1993, another El Niño year, but less intense than this year (according to the Southern Oscillation index), a severe storm/blizzard in March caused an estimated $3-$6 billion in damages in the Eastern U.S., with an estimated 270 deaths. Flooding during the summer of 1993 in the Midwest caused nearly $20 billion in damages and 48 deaths, and a drought in the Southeast caused about $1 billion in losses. El Niño effects in the winter of 1982-1983 caused an estimated $2 billion in damages nationwide. The largest impact was Southeast flooding. The National Climatic Data Center has placed an El Niño winter report on-line. Information can be found on the NCDC Home Page at: http://www.ncdc.noaa.gov/
Then click on "Hot," then on "TR98-02, The El Niño Winter of "97-'98."

White House Request

A National Climatic Data Center (NCDC) team consolidated March 1998 and 1998 year-to-date temperature and precipitation data for the U.S., and air and sea surface temperature data for the globe, for the White House at the request of Vice President Gore. March was wetter than normal and slightly cooler than normal for the U.S., but year-to-date statistics still portray a record amount of precipitation and continuing warmth in the lower 48 states. Globally, March was quite warm over land (upper 4 or 5 years this century), while record El Niño warmth continued over the oceans. Year-to-date surface temperature remains at record levels over land and sea.

March 1998 Surface Land Climate

The experimental SSMI-derived March 1998 data for snow cover, surface wetness, and temperature are now on line at: http://www5.ncdc.noaa.gov/plwebapps/plsql/ssmimain
Although the land surface is still quite warm over many areas, in general it has cooled down considerably from February 1998, which had the warmest temperature anomalies since this product began (data month January 1992). Positive surface wetness anomalies have persisted over equatorial east Africa and northern Argentina for many months. Early melting of the snow pack in eastern Europe in February (where it usually occurs in March) is associated with below average surface wetness during March. The United States Department of Agriculture found some very significant uses for these data and began using them in operational global assessments.

Warm, Wet Earth Day

A National Climatic Data Center (NCDC) team prepared three high-priority Earth Day packages for Under Secretary Baker, the Department of State, and the White House. The packages included one page of text and 12 pages of maps and graphs depicting the highly anomalous (warm, wet) climate of the U.S. and the Globe during the period from December 1997 through March 1998. All now appear on the NCDC Web Site for Earth Day.

Metropolitan Area Climate Summary Development

The Metropolitan Area Climate (MAC) Summary team has identified the parameters required and the exact look of the presentation itself. After consultation with the Regional Climate Centers, Los Angeles, CA; Chicago, IL; and Orlando, FL, will be used. Using the "city lights" satellite data, the extent of each metropolitan area has been established. Possible National Weather Service (NWS) Cooperative Data, Next Generation Weather Radar (NEXRAD), first order stations, etc., within each area have been identified. The next effort will be building the software for the Web-based summary. April 1998 data will be used in the first prototype. The Regional Climate Centers are helping in the effort to collect all available data for the month of April. An abstract detailing the MAC Summary was submitted to the American Meteorological Society's Second Symposium on the Urban Environment.

Customer Service Statistics Confirm Shift To Web Site

A 24 percent increase in electronic contacts from same month statistics a year ago illustrate the shift to electronic mail as a media of choice. Online customer statistics for April 1998 demonstrated the growing demand for World Wide Web data. April 1998 National Oceanic and Atmospheric Administration National Data Centers (NNDC) Web Site statistics indicated that 7,800 unique users accessed 1.3 Gigabytes of data via the site during the month, which represents a 44 percent increase from March 1998 totals. These online access totals are likely to show continued growth as new data sets are added to the NNDC Web Site during May 1998.

Disasters Declared

The Federal Emergency Management Agency (FEMA) reported 23 federally-declared disasters during the winter of 1998, many of which are considered El Niño related. National Climatic Data Center (NCDC) climatic data on extremes were used by FEMA as a major consideration in the decision to provide nearly $300 million in federal assistance for these disasters.

RCC Visits Completed

The National Climatic Data Center's (NCDC) Project Manager completed the last site visit of the six Regional Climate Centers (RCC) when the Northeastern Center was visited during April. A summary of the site visits was briefed to the NCDC staff in preparation for the RCC Directors' meeting at NCDC in early May. Funding for the RCCs through the Cooperative Institute for Atmospheric Sciences and Terrestrial Research (CIASTA) is almost complete. The FY98 funding year begins May 1 and June 1, 1998, at the various Centers. The Congressional delegations from the six states will be notified of this action.

New Building Standard

A new building standard entitled "Design and Construction of Frost-Protected Shallow Foundations" has been sent to the American Society of Civil Engineers for final balloting. For the past 18 months, the National Climatic Data Center (NCDC) participated on an ASCE committee responsible for developing the standard used in the practice of protecting foundations from frost damage in the home building industry. This work has already contributed to national and regional building-code changes which now allow frost protected shallow foundations. It is estimated that this type of foundation has the potential to provide national cost savings of nearly $300 million annually for new home construction. NCDC's Pete Steurer developed the national climate statistics which are used in the new standard and also served on the committee that developed the standard.

Data for Climate Prediction

Dr. David Easterling, of the National Climatic Data Center (NCDC), participated in the

Department of Energy (DOE) Accelerated Climate Prediction Initiative meeting at Battelle's Washington, D.C., offices on April 14, 1998. If funded, this DOE initiative would total about $750 million to $1 billion over 10 years. NCDC's role (if supported by the National Oceanic and Atmospheric Administration (NOAA) and DOE) would be as a data center to provide the necessary data sets and analyses to support model validation. Details of the proposal: several primary centers would be linked with high-speed communications , e.g., the National Center for Atmospheric Research, GFDL, NCDC, and Regional Climate Centers (RCCs) in a distributed computing environment. The driver for the initiative is to ramp up supercomputing in the U.S. climate modeling community. The initial deliverables would be a set of climate simulations for use by IPCC, the National Assessment and others. The RCCs would be based at the various DOE National Labs, but have links with NOAA labs and centers and cooperative institutes and universities. Their role would be to provide the simulations and necessary software, and expertise to the users.

CLIMATE DATA AND INFORMATION SERVICES

✦ Data Base Development

Unique ID Data Set Compiled

A monthly precipitation data set with unique location identifiers has been compiled for the "100-Year High Resolution Climate Data Set for the Continental United States" project. The project is a joint endeavor between Oregon State University, the National Center for Atmospheric Research, and the National Climatic Data Center. The project goal is to produce very high resolution precipitation analyses, and small relocations in the observing stations must be taken into account. Attaching appropriate, time changing locations to each piece of data involves considerable cross referencing between separate data and station information files. The data set eliminates cross referencing by attaching a location to each monthly precipitation value.

✦ Data and Information Distribution

Climate On-Line

Several National Climatic Data Center (NCDC) employees arranged for special Web access to preliminary World Meteorological Organization (WMO) global monthly CLIMAT messages for use by modelers and others researching climate and global change. Earlier file access systems formerly managed by National Weather Service had been terminated.

Storm Data Publication On-Line

This publication is available on-line through the following the National Climatic Data Center's (NCDC) Home Page Web address: http://www.ncdc.noaa.gov/ol/climate/climateproductsstormdata.html
NCDC produces this publication from the National Weather Service's (NWS) Paradox data base. The 119 Local NWS Weather Forecast Offices populate the data base with severe weather reports and send a monthly file to the NWS Office of Meteorology (OM). The OM then relays the monthly file to NCDC via FTP. NCDC archives the Storm Data Set as TD3910. NCDC personnel developed and implemented the Storm Data Archive Subsystem that produces the ASCII archive text file from the Paradox data base. Data is stored in a relational data base format allowing queries to be made on a single or multiple fields.

New Climatic Extremes Web Site

The National Climatic Data Center (NCDC) has placed a new web page online entitled "Climatic Extremes and Weather Events." This page can be accessed via NCDC's Web site in the "Climate Resources" system and under "Products and Publications." This Web page provides a one-stop location for NCDC online data and information related to climatic extremes, weather events, severe weather, climate change, and El Niño. Numerous climatological maps and tables, special reports, satellite images, and similar material are linked through this system. Examples include five reports regarding this winter's weather, over 40 satellite images of El Niño enhanced severe weather systems, and long-term climatology for various extremes. NCDC has seen an increase in the number of inquiries regarding these topics, from national news media, government agencies, and others. This system provides an easy mechanism for providing data and reports to users.

NNDC Server Design Meeting

The National Oceanic and Atmospheric Administration National Data Centers (NNDC) server team met in Boulder, CO, the last week of April to develop a detailed plan for the FY98 NNDC server. The team identified all the tasks necessary to provide the framework for a functioning system. This phase 1 effort will demonstrate the ability to search, retrieve and deliver any of the 15 data sets that will be on-line. The FY98 system will deliver samples of each aspect of the final system. The NNDC team has worked out an agreement with the Environmental Systems Research Institute (ESRI) software company. ESRI will install a GIS and Spatial Database Engine evaluation package at four development sites, and will provide a week of consulting to kick-start the project.

Reanalysis

The National Climatic Data Center is continuing to move forward in our work to provide reanalysis data on the Web. A total of 7,100 cartridges (containing a total of 670 gigabytes of the reanalysis output data) have been loaded on the Hierarchival Data Storage System file server. In addition, we have almost completed loading 508 gigabytes of reanalysis input data on the same platform.

3590 Archive Project

The New Archive System (NAS) located in Suitland, MD, underwent extensive testing during April. The new and the old archive systems were run in parallel and several software and logistics problems were resolved. The archive data and catalogs of both new and old systems were compared. Data integrity was validated. The NAS performed well and is slated to go operational on Monday, May 4.

Cooperative Stations' Data Inventories

As part of a continuing project with the Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado, Boulder, funded by the Natural Resource Conservation Service (NRCS), the National Climatic Data Center (NCDC) completed detailed inventories of cooperative daily summary data for five states bordering the Mississippi River (Minnesota, Iowa, Missouri, Arkansas, Louisiana). The inventories were then processed through a program to select the better stations based on several criteria for missing data (consecutive missing days, missing months, etc.). CIRES will use the data and inventories for these states to build a serially complete data set of maximum/minimum temperature and daily precipitation for the selected stations. The final goal of this project is to produce a serially complete summary of day data set for the entire U.S. Thus far, NCDC has completed the inventory process for all states west of the Mississippi River, while CIRES has completed the final data set for portions of this area. A number of NRCS customers have requested such a data set for use in various models which use daily data.

Tornado Debris Fallout from Atlanta at Near Record Distance

The "Atlanta Journal-Constitution" requested color-enhanced infrared Geostationary Operational Environmental Satellite (GOES) imagery of the Birmingham, AL, F5 tornado of April 8. The National Climatic Data Center (NCDC) also supplied similar GOES images of the tornadoes which hit Atlanta's northern suburbs a few hours later, causing a reported $100 million in damage. One of the suburbs hit was Dunwoody. On Monday, April 13, television station WYFF of Greenville, SC, reported that a canceled check from a Dunwoody family had been found near Townville, SC. Recognizing that such a distance was extremely far for debris from an F2 tornado to travel, an NCDC meteorologist reviewed the publication "Fallout of Debris from Tornadic Thunderstorms 1: A Historical Perspective" by John T. Snow, et al., of the University of Oklahoma. After reading the article, NCDC realized the Dunwoody check had traveled a near-record distance, and reported the information to the Tornado Debris Project at the University of Oklahoma, which researches long-distance transport of tornado debris. NCDC also alerted the "Atlanta Journal-Constitution" of the high-flying wayward check. Reporters from the "Journal" called the owner of the check, whose house had been destroyed, and found that the owner had been contacted by the finders of eight checks which had been transported to SC at distances ranging from 95 - 132 miles.

National Geographic Society Creating Educational CD-ROM on Weather

The National Geographic Society is currently developing an interactive CD-ROM simply called "Weather." The CD-ROM will be aimed for school children from grades five to nine. The National Climatic Data Center (NCDC) will receive credit for supplying animated GIF images of Hurricane Andrew, developing thunderstorms, severe frontal systems, and other weather related phenomena. The CD-ROM is expected to be published this fall.

NEXRAD

The Operational Support Facility (OSF) in Norman, OK, provided the National Climatic Data Center (NCDC) with a test tape of the next level of the WSR-88D operating system software for evaluation and documentation for review. The next level of Next Generation Weather Radar (NEXRAD) Build-10 is due to be implemented in the fall of 1998. Testing of the Build-10 was successful. Under Build-10, data files for NEXRAD Level II will contain some new message types that will provide metadata, such as adaptable parameters and clutter suppression maps, which researchers have long desired.

✦ Research Customer Service Group Requests

NCDC Normals CD-ROM Used in Crop Assessment Studies

A researcher with the United States Department of Agriculture (USDA) World Agriculture Outlook Board obtained the U.S. Divisional and Station Climatic Data and Normals CD-ROM for use in research projects. The researcher is using station and division climate normals and cooperative station data in conducting crop assessments based on weather and climate information. The research project is also ingesting near real-time cooperative station data as part of their analysis. The cooperative station database is a "gold mine" for their studies because the cooperative data is usually the only source for weather and climate information in rural or farm areas.

✦ Satellite Data Requests

Gypsy Moth Impacts

The U.S. Forest Service is currently funding a major long-term study of the impact by the gypsy moth on nesting tropical migratory birds and terrestrial and aquatic salamanders in central Appalachian hardwood forests. One sampling

method involves light trapping, which utilizes the placement of ultraviolet lights in association with collection devices to attract moth species other than the gypsy moth. Each device operates from dusk to dawn, and are placed out 15 Mondays during the summer months. The two greatest influences on light trap efficiency are the temperature and available light from the moon. Data from this collection method must be corrected based on these two factors. Temperatures are easily monitored in the field and clear-sky moon fraction illumination is readily available from a number of sources. Actual available moon light at a particular ground location is a function of cloud cover, thus the use of infrared satellite imagery seems the likely solution. The National Climatic Data Center is assisting University of West Virginia researchers in obtaining Geostationary Operational Environmental Satellite (GOES) and Polar Orbiter data.

✦ Regional Climate Centers

Climate Review Workshop

The planning effort for the "Climate Product Review Workshop" continues. This workshop will bring together the Regional Climatologists and other regional user services personnel along with NCDC staff to evaluate the status of climate products and to identify areas where improvements should be made. Representatives from the National Weather Service (Climate Prediction Center and a field office) and the United States Department of Agriculture/NRCS will attend the workshop at NCDC on June 23-25, 1998.

Letters of Intent Submitted

Three NCDC Environmental Sciences Data Information Management (ESDIM) Letters of Intent for FY99 were submitted in conjunction with the RCCs. The activities include the digitizing and quality control of historical station history information, the integration of regional and state climate data into the national database, and the speeding of Cooperative Observer observations into the national digital archives.

Software Development

Primary emphasis for the Western Regional Climate Center (WRCC) was improvement of the ability to acquire, decode and store near real-time data. Two projects which have driven this effort are monitoring for the Western Governors Association's Western Drought Coordination Committee, and the weekly climate summary for the Idaho Agricultural Statistics Service.

Two programs in the WRCC software library have been enhanced/refined based on suggestions from Regional Climate Center users. A listing/ graphing program using the SOD daily values from the current (provisional) data sets, updated in near real-time, www.wrcc.dri.edu/cgi-bin/ sod_graph. pl, and a program which aggregates daily data by month to create annual totals beginning with any month. Output is tabular.
www.wrcc.dri.edu/cgi-bin/sod_xtrmts1x.pl

Analysis of Severe Weather

A rainstorm during July 17-18, 1996, struck southern Wisconsin, northern Illinois, and northern Indiana, and set the all-time 24-hour rainfall record for Illinois (16.92"). This storm caused over $600 million in damages, mainly in the Chicago metropolitan area. The Midwestern Climate Center submitted three articles to the "Journal of Applied Meteorology" on this event. They have been accepted for publication.

Cooperation with the State Climatologists

The Midwestern Climate Center plans to collaborate with the region's state climatologists to key selected historical climate data that are not now in electronic format. These data sets include pre-1890 daily data from Army Forts, pre-1948 daily snowfall data, and pre-1948 hourly data.

Adding Observational Data

A competitive grant was received by the Southern Regional Climate Center (SRCC) from the

Louisiana Board of Regents to upgrade the Louisiana AgriClimatic Information System (LAIS). The grant will provide funding to connect 14 LAIS stations to the Internet. This will allow these stations, and 2 others connected via local telephone lines, to be monitored in near real-time. Data management responsibilities for this system will be transferred to the SRCC and a computer fileserver will be purchased from grant funds.

User Services Statistics

The Regional Climate Centers report that direct user contacts in April totaled 3,408, requests serviced by on-line systems numbered 10,795, and Web page “hits” totaled over 1.4 million.

Historical Data on CD-ROM

A set of CD-ROMs of the historical ALDS (lightning data) and RAWS (hourly data) data were created by the Western Regional Climate Center for the National Interagency Fire Center at Boise, Idaho. These CDs will serve as their historical archive, and will be used to reply to Freedom of Information Act requests.

Participation in Drought Workshop

“Planning for the Next Drought Workshop” was conducted March 31-April 2 in Columbia, SC, with the Southeastern Regional Climate Center (SERCC) as host. Attendees included seventy federal, state, local government, industry, and university participants, and two Taiwanese and two Mexican representatives. Workshop foci were methodologies for drought plan development, guidance on assessing drought vulnerability, stakeholders' involvement in the planning process, and improved media interaction ways. The workshop improved networking across the board.

Proposal Prepared

A proposal entitled "The Feasibility of Removing Shield Bias from Historical Temperature Observations" was submitted to the National Science Foundation by the High Plains Climate Center.

Paper Published

A paper, "A Method to Infer Observation Time Based on Day-to-Day Temperature Variations," was submitted for publication to the “Journal of Climate” by the N.E. Regional Climate Center.

Training

ArcView/ArcInfo training and archival continued at the Southeastern Regional Climate Center on Next Generation Weather Radar (NEXRAD) rainfall and data analysis. Products will be made starting next month from a new code developed to match ground data observation intervals.

SCIENTIFIC AND PROFESSIONAL ACTIVITIES

✦ Climate and Global Change

Release of GHCN Version 2

The beta release of Global Historical Climatology Network (GHCN), Version 2, precipitation data set is complete. The data set contains 20,790 stations (compared to 7,533 for Version 1). The Office of Global Programs, the National Aeronautics and Space Administration, and the Department of Energy have been sponsors, in addition to the National Oceanic and Atmospheric Administration. The new data have been subjected to much improved quality control, duplicate elimination, and homogeneity testing.

✦ Working Groups/ Committees/Meetings

Weather Financial Instruments

Mike Crowe, of the National Climatic Data Center (NCDC), as well as representatives from the National Weather Service and the private consulting sector, will be presenters at a May 11-12 seminar on weather and climate financial instruments organized by a group of Wall Street brokers in New York City. Weather and climate insurance is one of the oldest forms of insurance. However, there is now a growing number of instruments traded and offered, and the complexity of those instruments is increasing rapidly. The information services which are being used to provide the data which determine the value of climate derivatives will be explained. In preparation, Mike Crowe gave an invited lecture at the first Weather Risk Management Conference held in New York City, April 8-9. He discussed climate perspectives and data management and distribution at NCDC to an audience of about 150 people consisting of representatives from the energy, insurance/reinsurance and financial sectors from across the country. Other representatives from the Department of Commerce and the National Weather Service also participated. The conference focused on the developing field of weather derivatives which offers risk management alternatives through the use of financial instruments. Conference attendees were interested in the timely availability of accurate weather and historical climate data and metadata observed by the National Weather Service and distributed and archived at NCDC, which are used in the preparation and resolution of the derivative agreements.

DSAC Meeting

NCDC hosted the quarterly Data Systems Advisory Committee (DSAC) meeting in Asheville, NC, April 14-15. The major discussion topics were Year 2000 compliance issues, Information Technology (IT) Security recommendations, and on-line disk storage costs. In addition to the member reports on IT issues within their respective groups, there were presentations on Lotus Notes groupware, Bell South wide area communication links, and the National Climatic Data Center's web-based help desk tool set that has recently been installed for use at the National Oceanographic Data Center.

NVDS Meeting

The National Climatic Data Center hosted a National Oceanic and Atmospheric Administration (NOAA) Virtual Data System (NVDS) Working Group Meeting in Asheville April 15-16 to provide project status reviews and to begin discussing the framework for FY99 tasks. Demonstrations were provided on the On-Line Store, and a search engine for HTML documents. The Systems Performance project team met to discuss requirements for NVDS communication links and essential processors. The team presented a draft of requirements and proposed solutions for meeting these.

UNISYS IDR

Customer Order Management Processing System (COMPS) team members, Systems Acquisition Office personnel, and Marada personnel attended an Incremental Design Review (IDR) at Unisys headquarters in Virginia Beach, VA, during April. Up-to-date screens, processing, and functionality were presented by Unisys staff. Government personnel reviewed the entire system and provided comments. A June implementation is planned for COMPS Build 2.0.

COMDEX Conference

Steve Evans, of the National Climatic Data Center, attended the COMDEX Spring 98 conference in Chicago, IL, April 20-23. Despite the crash of Windows 98 during a live demonstration (with Bill Gates present), the new MicroSoft desktop operating system should provide good

improvements over Windows 95. Other top issues at the conference were virtual private networks, voice recognition software for desktop PCs, video conference-quality cameras, software for PCs at less than $100, electronic commerce, and IT security.

Extremes of Climate

The National Climatic Data Center's (NCDC) Dr. David Easterling has been invited to participate in a panel discussion on extreme climate events at the upcoming Global Energy and Water Cycle Experiment (GEWEX), Continental-scale International Project (GCIP), Mississippi River Basin meeting in St. Louis, MO, in June.

GEWEX Meeting

Kevin Gallo, of the National Climatic Data Center, attended a meeting to discuss plans for the Global Energy and Water Cycle Experiment (GEWEX) Continental-scale International Project (GCIP) activities in the post-2000 time frame, held in Wheaton, MD, April 20-21. Reports of current progress were presented by several GCIP investigators. Members of several Federal agencies not currently involved in GCIP were invited to discuss their potential future participation. Preliminary plans for GCIP in the post-2000 phase call for a greater emphasis on weather and climate prediction and a more integrated approach to land surface modeling.

✦ Visitors

Montreat College Student Group

A group of ten college students from Montreat College, near Asheville, NC, were given a tour of the National Climatic Data Center (NCDC). The group was headed by professor Brian Joyce, who teaches the class environmental studies. They toured the NCDC Weather Museum, the archives area, and the computer room.

Publications

The Journal of Geophysical Research has officially accepted the first difference paper: Thomas C. Peterson, Thomas R. Karl, Paul F. Jamason, Richard Knight, and David R. Easterling, 1998: The First Difference Method: Maximizing Station Density for the Calculation of Long-term Global Temperature Change. Journal of Geophysical Research - Atmospheres, in press.

✦ Interactions with NOAA Line Offices

NEXRAD and GOES Satellite Data Supplied for Severe Weather Studies

The National Climatic Data Center (NCDC) will supply Geostationary Operational Environmental Satellite (GOES) -8 satellite and Next Generation Weather Radar (NEXRAD) Level II data to the Regional and Mesoscale Meteorology team office of the Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University. CIRA will use the satellite and NEXRAD data to study severe weather outbreaks which occurred this year. GOES-8 satellite data from March 20, 1998, will be used to study a tornado which struck without warning near Gainesville, GA, killing 12. NEXRAD WSR88D Level II data for five National Weather Service and military radar sites in the southeast U.S. from April 8-9 will be used in their study of the April 8, F5 tornado which struck the Birmingham, AL, suburbs killing 32, the most in a single F5 tornado since 34 were killed in the Xenia, OH, tornado of April 3, 1974. The same thunderstorm complex moved over the northern suburbs of Atlanta, GA, producing a series of F1 and F2 tornadoes which killed one and caused more than $100 million in damages.

Rawinsonde Replacement System

National Climatic Data Center (NCDC) staff members met with the National Weather Service (NWS) staff responsible for the Rawinsonde

Replacement System (RRS). NWS is still working to solidify the details of the new BUFR upper air format in which these data will be shipped to NCDC. These data will be sent to NCDC via NOAAPORT, or on a hard digital media. At the earliest, the first RRS field sites will be installed in late 1999 or early 2000. NCDC is trying to obtain some test data. The Regional Climate Centers have submitted a joint proposal in response to the NCDC request for proposal, "A study to determine the options for the use, processing, and archiving of observational high resolution upper air data." The results of this project are due in November 1998.

EMPLOYEE ACTIVITIES

✦ EEO and Community Outreach

Job Fair '98

The National Climatic Data Center's (NCDC) Sam McCown and Greg Hammer represented NCDC at "Job Fair '98," held at Asheville's Grove Park Inn on April 14. The fair was sponsored by the Western NC Career Consortium of six local universities and colleges. NCDC set up a booth and provided NCDC and National Oceanic and Atmospheric Administration handouts. Potential employees in computer and meteorological fields were given special attention.

School Talks

Tom Ross spoke to the 5th grade class at the North Canton Elementary School in Canton, NC, in April. He gave a two-hour presentation to about 75 students concerning El Niño, local climatology and weather, and severe weather effects. He also discussed the educational requirements needed for a career in meteorology.

Mayoral Visit

Ms. Leni Sitnick, Mayor of Asheville, NC, spoke to federal employees at the National Climatic Data Center on April 10, 1998, about the local community and her visions for the future of Asheville. This briefing was sponsored by the Federal Women's Program.

✦ Personnel Resources

Contractor Support

Ann Barrett of Marada and Ping Zhuang of DynCorp started work this month in support of the Unisys migration and Y2K projects.

✦ Training

HPSS Training

Jody Klein attended a four day course covering the installation and management of the High Performance Storage System (HPSS) software which has been ordered; this software will operate the tape robotic system employed at the National Climatic Data Center for near-line data storage. The training was conducted by IBM at their Houston, TX, facility.

Windows NT Workstation Training

Paul Whealan coordinated a three-day, on-site Windows NT Workstation training class conducted by the American Research Group from Cary, NC. Fourteen staff members were trained in the setup and management of the Windows NT Workstation operating system.

Seagate Storage and Novell Intranetware Training

Karol Pittman attended the Seagate Storage Exec

Course which included modules on installation and administering and troubleshooting the backup software. Ms. Pittman also attended the Novell Intranetware 4.11 Advanced Administration class. The course topics included administering Novell Directory Service (NDS), securing the directory tree, troubleshooting NDS, and optimizing the server.

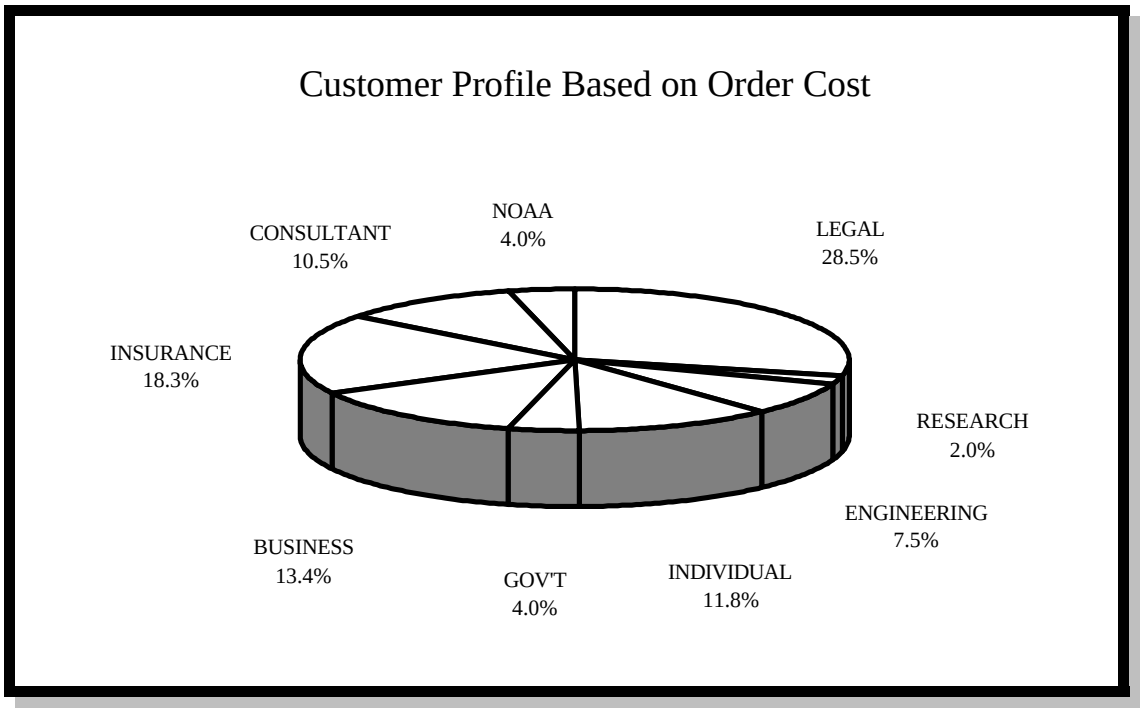
ArcView Training

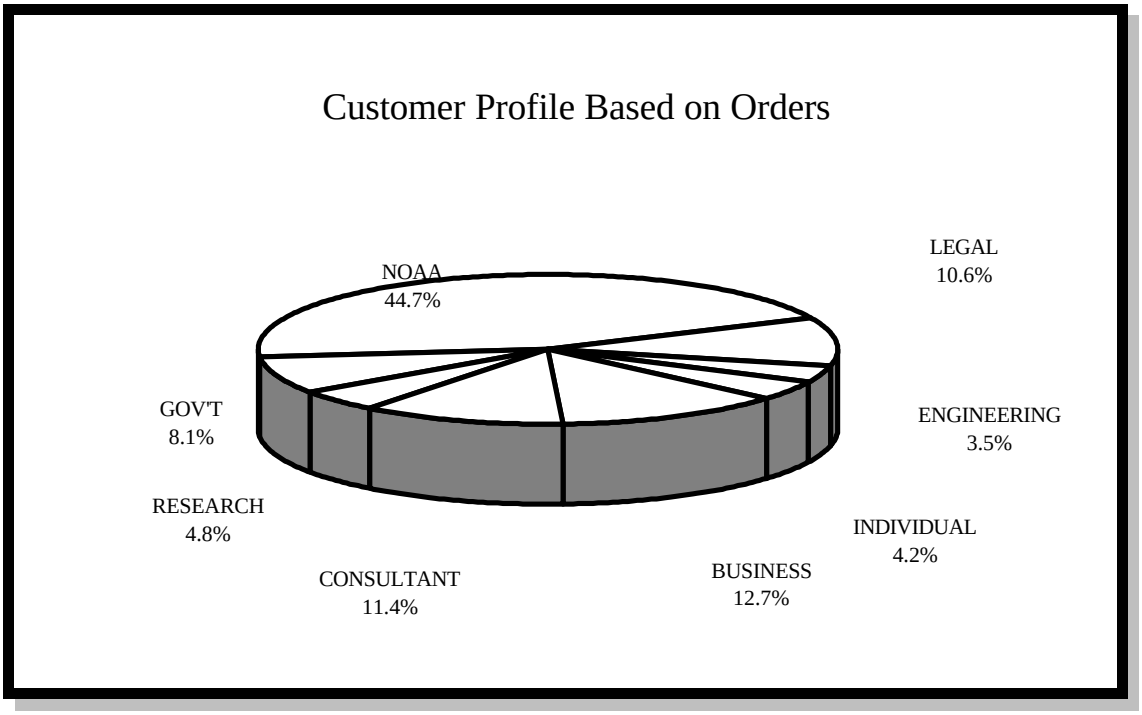
Andy Goss and Marc Plantico attended a three-day ArcView training course offered at the National Oceanic and Atmospheric Administration's (NOAA) Coastal Service Center (CSC) in Charleston, SC. The course consisted of the Environmental Systems Research Institute's certified 2-day "Introduction to ArcView Geographic Information System (GIS)," and a third day looking into ArcView extensions. ArcView is a desktop GIS with an easy to use point and click graphical user interface that allows loading of spatial and tabular data and display of the data as maps, tables, and charts. ArcView is widely used for GIS applications both within NOAA and throughout the Federal government, and is currently used in several projects at NCDC. These include the U.S. Climate Atlas project, NNDC On-line Store, and NOAAServer projects.

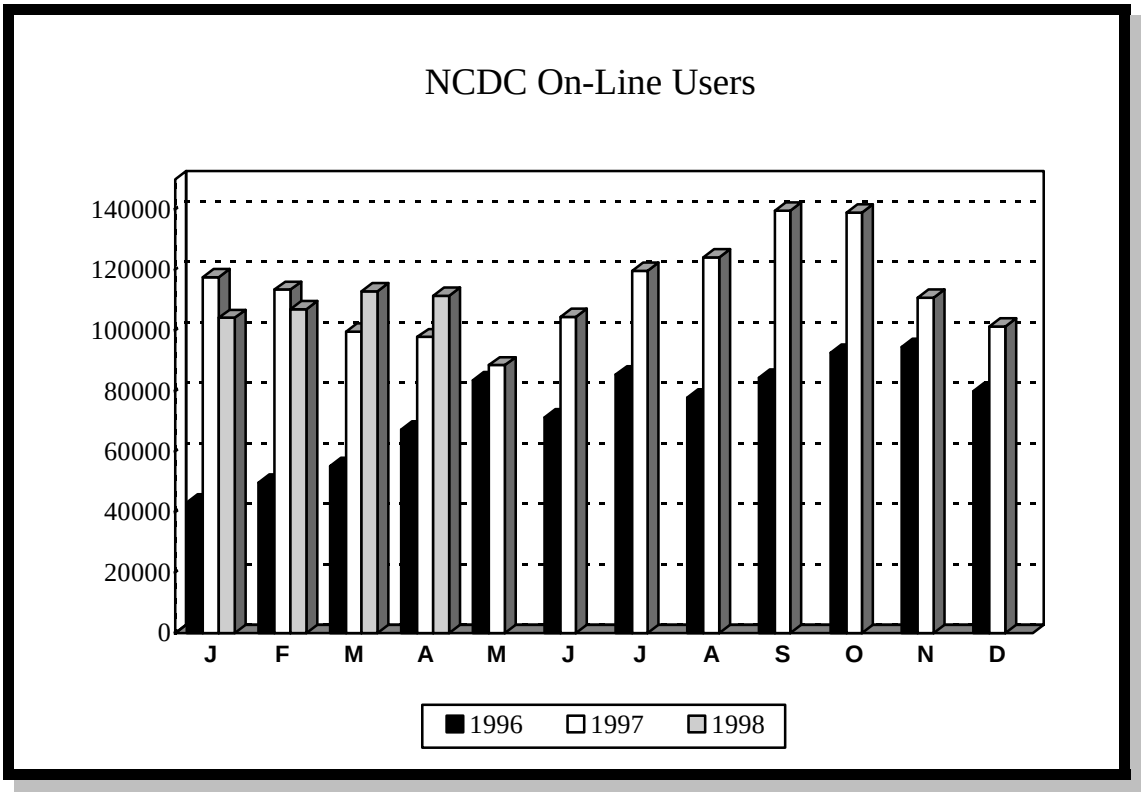
Delphi Training

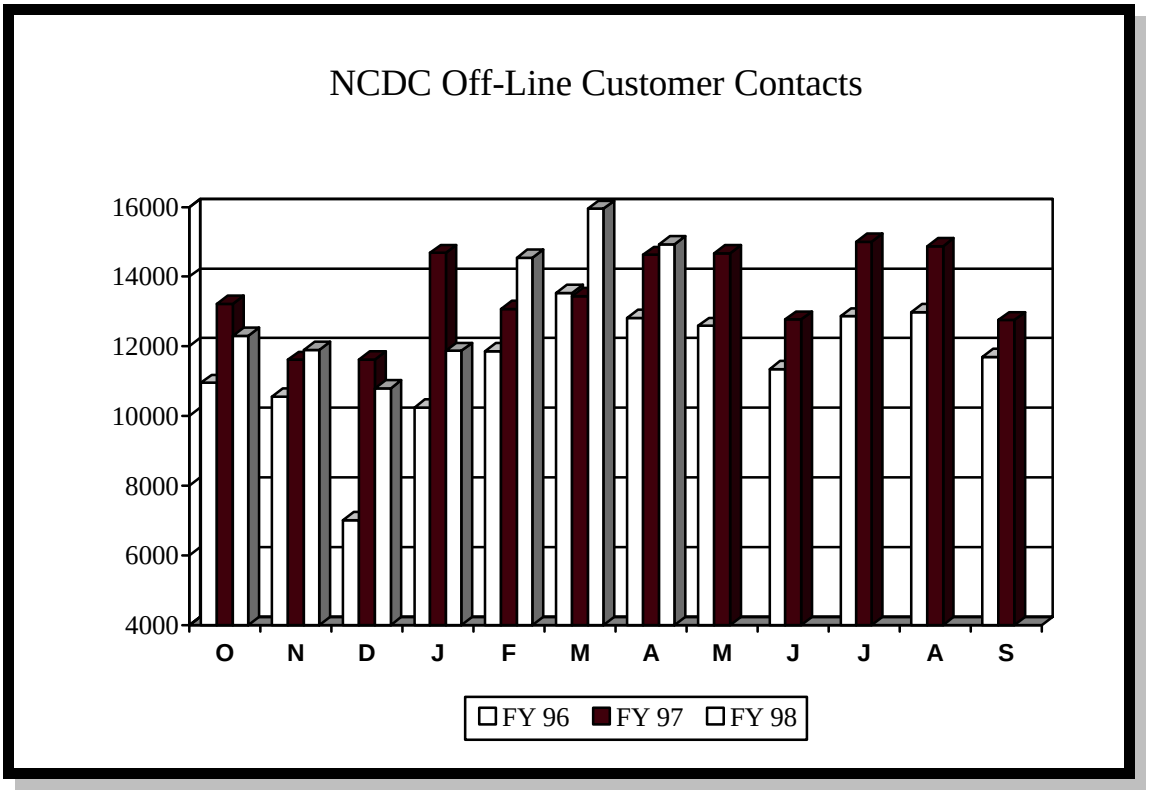
Katherine Fincher attended Delphi Training April 6-10 in Atlanta, GA, at DSW Group Ltd., a Borland-certified training site. Delphi is a language used for the new Customer Order Management Processing System, which is scheduled for implementation at the National Climatic Data Center in June.

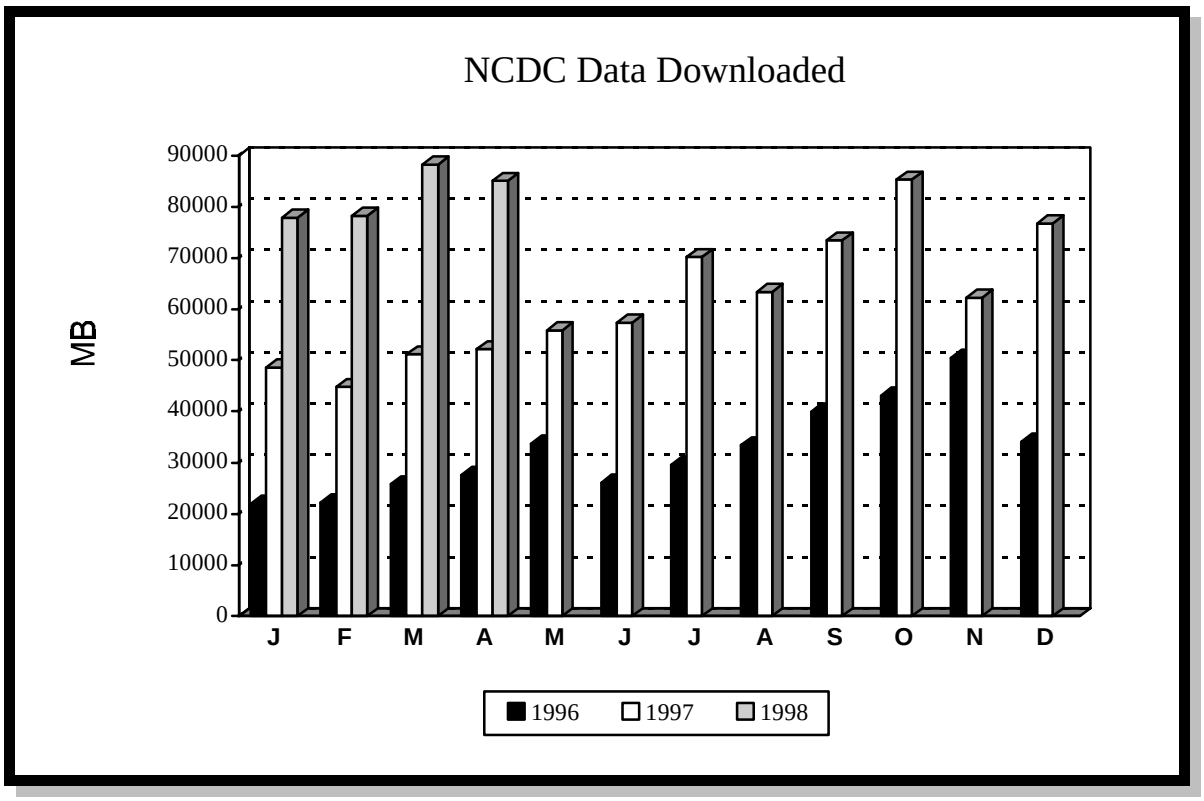
The following charts and graphs show the latest National Climatic Data Center user and data statistics.

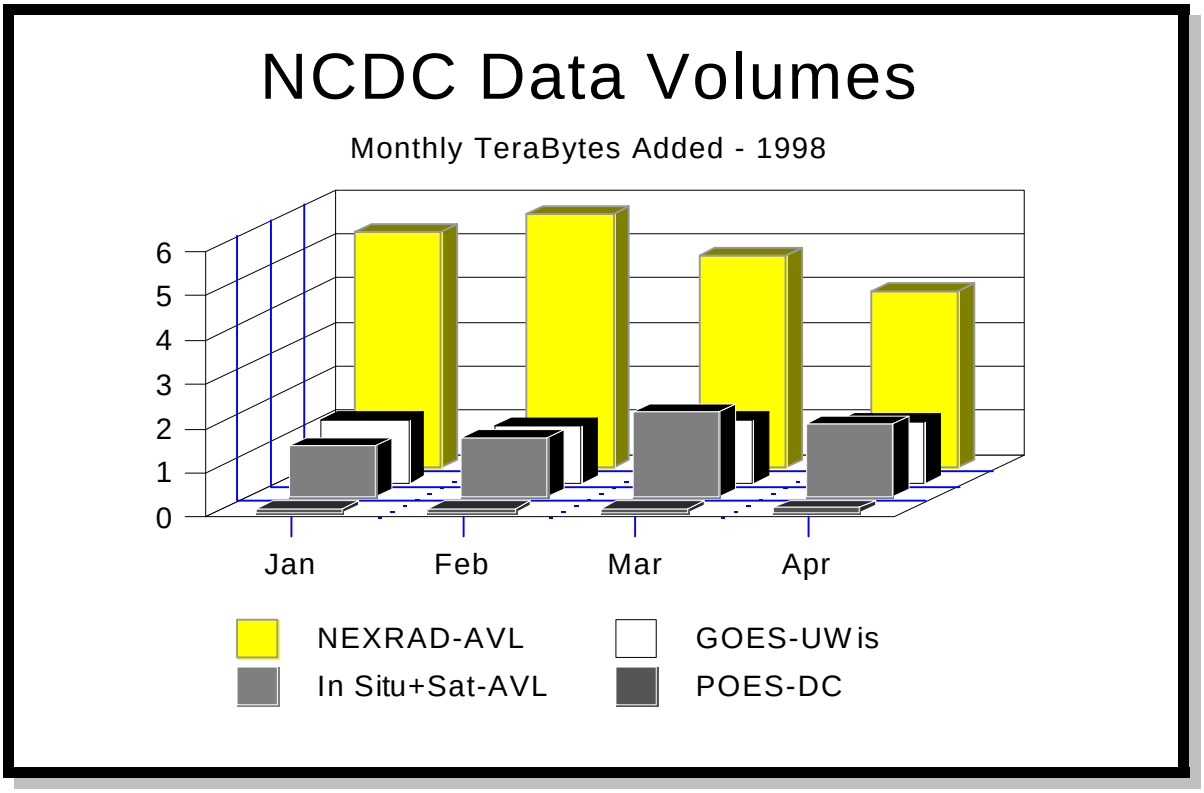





NCDC On-Line Users
140000
120000
100000
80000
60000
40000
20000
0
J F M A M J J A S O N D
1996 1997 1998


NCDC Off-Line Customer Contacts
16000
14000
12000
10000
8000
6000
4000
O N D J F M A M J J A S
FY 96 FY 97 FY 98


NCDC Data Downloaded
MB
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
J F M A M J J A S O N D
1996 1997 1998


NCDC Data Volumes
Monthly TeraBytes Added - 1998
6
5
4
3
2
1
0
Jan Feb Mar Apr
NEXRAD-AVL
In Situ+Sat-AVL
GOES-UWis
POES-DC